cardiovascular
ADVANCING CARDIOVASCULAR SERVICES
Our Comprehensive Cardiac Care Program
United Regional is a leader in the treatment of heart and vascular diseases, providing prevention education, advanced diagnostics, specialized emergency care, and a highly skilled team of cardiologists, cardiovascular surgeons and technologists, nurses and other clinical providers.

As a leader in cardiovascular services, United Regional continually brings advancements in treatment and technology to our community. In 2017, we invested in both additional cardiovascular equipment and the development of an electrophysiology program to expand the cardiac care services provided in our community.

We hope you will visit our website at www.unitedregional.org where you’ll find more information on the services we offer.
Treatment Capabilities

Cardiac Catheterization

A common phrase used during many cardiac events is “time is muscle.” Every minute of delay in treating a heart attack increases the likelihood and the amount of cardiac muscle damage due to oxygen deprivation.

In 2006, the American College of Cardiology and American Heart Association introduced a “door-to-balloon” standard of 90 minutes or less. The clock starts ticking for door-to-balloon measurement when the patient enters the emergency room with symptoms of a heart attack and concludes when the patient is in the cardiac catheterization lab and the “balloon” has been inflated in the blocked artery to open it and restore blood flow.

To ensure that patients receive the highest quality of cardiac care, United Regional adopted the same standard and follows this protocol:

- Medical providers in our Emergency Department (ED) begin tests such as an EKG and lab work on the patient. Once the ED physician determines the patient is experiencing a heart attack, the cardiac catheterization lab staff is notified as well as a cardiologist, respiratory therapist, and the house nursing supervisor, along with a security officer, who helps ensure fast and safe patient transport.

- The patient is then taken to the cardiac catheterization lab where the team inserts a catheter guidewire to the location where an artery is blocked. The balloon is inflated, returning blood flow to the heart and decreasing the likelihood of more damage.

**In 2018, United Regional averaged a door-to-balloon time of 59 minutes, significantly better than the national standard of 90 minutes.**
Treatment Capabilities

Electrophysiology Program  
*Adding to United Regional’s Comprehensive Cardiac Care*

Millions of people experience abnormal heart rhythms, called arrhythmias, at some point in their lives. Although many are harmless, some arrhythmias can be serious and even deadly. Electrophysiology (EP) is a subspecialty of cardiology that diagnoses and treats abnormal heart rhythms.

**Abnormal heart rhythms include:**

- Arrhythmias (Tachycardia and Bradycardia)
- Palpitations
- Syncope
- Atrial Fibrillation
- Atrial Flutter
- Ventricular Arrhythmias
- Supraventricular Arrhythmias

United Regional’s Electrophysiology Program provides complex cardiac ablations and other electrophysiology services, allowing patients to stay in our community for this specialized care.

- Pacemaker and Defibrillator Implant
- Biventricular Pacemaker and Defibrillator Implant
- Supraventricular Tachycardia Ablation
- Ventricular Tachycardia and PVC Ablation
- Atrial Fibrillation Ablation (Radiofrequency and Cryoablation)
- Atrial Flutter Ablation
- Wolf Parkinson White Syndrome Ablation
- Implantable Rhythm Monitors
- Subcutaneous Defibrillator Implant
Treatment Capabilities

Cardiovascular and Thoracic Surgical Procedures

Cardiac
- Aortic Valve Replacement
- Atrial Appendage Ligation (to prevent blood clots)
- Coronary Artery Bypass
- Coronary Artery Bypass with Aortic Valve Replacement
- Epicardial Lead Placement, thoracotomy approach
- Mitral Valve Replacement and Repair
- Pericardial Window (to remove a small part of the sac around the heart to drain excess fluid)
- Pacemaker Implantations
- Pacemaker Lead Extractions
- Pacemaker Lead Extractions with Laser

Thoracic
- Chest Thoracoscopy, video-assisted (minimally invasive thoracic surgery performed with the use of small fiber optic cameras to look inside the chest)
- Lung, PleurX Catheter Insertion (for fluid drainage)
- Mediastinoscopy (procedure to view the space between the lungs)
- Thoracotomy (surgical incision into the chest wall)

Vascular
These are examples of the vascular procedures performed at United Regional:
- Endovascular Abdominal Aortic Aneurysm Repair
- Femoral Artery Exploration and Repair
- Femoral Endarterectomy (procedures to remove blockage in the femoral artery)
- Neck, Carotid Endarterectomy (procedure to remove blockage in the carotid artery)
- Carotid Stent
In addition to the traditional cardiovascular and thoracic procedures listed, United Regional also offers these surgical procedures:

- **Beating Heart Surgery**
  In a conventional coronary artery bypass surgery, medication is given to the patient to stop the heart from beating and a heart-lung machine takes over the function of the heart and lungs during the surgery.

  In beating heart surgery, the patient’s heart and lungs continue to function, and surgeons use a tissue stabilization system to immobilize the area of the heart where they need to work. The advantages of beating heart surgery are reductions in mortality, bleeding, and stroke, as well as earlier discharge from the hospital.

- **Laser Procedures**
  Occasionally, there is a need to remove pacemakers and leads, i.e., wires attached to the heart via pacemakers or defibrillators. In cases requiring lead extraction, lasers can be used to help avoid the need for open-heart surgery to remove these devices. In removal by laser, only a small incision over the pacemaker or defibrillator site is used, reducing the risks of the surgical intervention. Our cardiovascular surgeon, Dr. Shafi Mohamed, who is very experienced in laser procedures, has brought this new service to our community.

- **Endovascular Aneurysm Repair**
  The standard surgical treatment for thoracic aortic aneurysms is an open-chest aneurysm repair, but United Regional offers treatment of many thoracic and abdominal aneurysms with a minimally invasive procedure called an endovascular stent graft.

  Endovascular stent grafting, or endovascular aneurysm repair (EVAR), is a surgical procedure done inside the aorta using a thin tube called a delivery catheter. Unlike open surgery, which involves a long cut in the abdomen, endovascular surgery requires only two small incisions in the groin area. Endovascular repair of thoracic aneurysms is generally less painful and has a lower risk of complications than traditional surgery because the incisions are smaller. Endovascular aorta aneurysm procedures also may allow patients to leave the hospital sooner and recover more quickly. United Regional has been offering endovascular procedures since 1999.
Heart Failure Clinic

When the main reason for heart failure readmissions is due to the patient’s medications or diet, the focus turns to aftercare. United Regional’s Heart Failure Clinic offers education in regard to diet, exercise and medication and also works to optimize the medication doses.

**United Regional helps heart failure patients improve their quality of life and avoid visits to the ED and re-hospitalizations.**

United Regional has established a Heart Failure Clinic to help patients understand the importance of taking their medications and monitoring and managing their symptoms after they are discharged from the hospital. A nurse from the Heart Failure Clinic may contact patients admitted to United Regional with the diagnosis of heart failure. If necessary, the patient is scheduled to be seen in the Heart Failure Clinic after discharge. During this time the patient’s medication is regulated and education is provided on how to monitor symptoms and what lifestyle changes to make, such as increasing physical activity and eating a low sodium diet. Doing so helps improve the patient’s quality of life and helps them avoid a re-hospitalization.

United Regional opened a Heart Failure Clinic in May 2012. The graph below shows the results achieved by United Regional in 30-day readmission rates for heart failure patients that attended the Heart Failure Clinic program in 2018.

### Heart Failure Patient Readmission Rates

<table>
<thead>
<tr>
<th>2018 Readmission Rate for Patients in United Regional Heart Failure Clinic</th>
<th>National Average for Heart Failure Patients*</th>
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</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Graph showing readmission rates" /></td>
<td>18.52%</td>
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<tr>
<td>11.63%</td>
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*As reported by the Center for Medicare and Medicaid Services
Measuring the Quality of our Cardiovascular Services

Chest Pain Center with Primary PCI and Heart Failure Program

United Regional has received the American College of Cardiology accreditation as a Chest Pain Center with PCI (Percutaneous Coronary Intervention) and Heart Failure Program for achieving a higher level of expertise, more effective diagnoses, and more appropriate and rapid treatment of patients with heart attack symptoms.

Chest Pain Center with Primary PCI

Hospitals awarded this designation have Primary PCI available 24/7 every day of the year. This means that we have a call team made up of an interventional cardiologist and cardiac catheterization lab staff who arrive to the facility within 30 minutes of STEMI activation. A STEMI is an ST-elevation myocardial infarction, which is a more precise definition for a type of heart attack that’s caused by a prolonged period of blocked blood supply that affects a large area of the heart. As a designated Chest Pain Center with PCI, we also have mapped our STEMI processes to maximize efficiencies which lead to quicker treatment and improved outcomes.

*American Hospital Directory for non-federal, short-term, acute care hospitals
**American College of Cardiology

Out of 407 hospitals in Texas*, United Regional is one of only 55** to receive this accreditation.

Heart failure continues to be a growing health problem in the U.S. — affecting nearly 6.5 million adults. According to the American College of Cardiology, this number is predicted to rise to an estimate of almost 8 million by 2030. In response to these staggering statistics, United Regional focuses on each heart failure patient’s continuity of care and utilizes the tools that extend length of life and enhance quality of life.

Heart Failure Program

Our accreditation of our Heart Failure Program helps ensure that systemic, quality-of-care measures are met and that required protocols, processes, and systems are put in place to produce the most effective care delivery model for heart failure patients. Accreditation engages hospitals in how evidence-based science, quality initiatives, process improvement, and guidelines can be combined and implemented to improve a hospital’s performance, patient throughput, and the quality and consistency of care. It better positions a hospital as a preferred provider of cardiovascular care.

*American Hospital Directory for non-federal, short-term, acute care hospitals
**American College of Cardiology

Out of 407 hospitals in Texas*, United Regional is one of only 5** to receive this accreditation.
Cardiologists

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Our Cardiology Team

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Director of Cardiology Services

Hilary Wolf, PA
Physician Assistant

Cardiac Catheterization Staff

Front row: Brianna Schlesteder; Lisa Green, RT; Fajer Majeed; Haley Howerton, RT; Zach McGuire, BSRT; Kristin Shoop, RT, RCIS; Carolyn Murray, RN, RCIS; Lisa Turner, RN; Heather Shaver, RN; Jessi McBride, RN; Rhonda Corbell, RN; Hilary Wolf, PA.

Second row: Kim Kennedy, RN; Pam Taff; Susan Page, RN; Kyle Mayfield, RN, RCIS.

Third row: Larry Dwyer, CRTT, RCIS; Mark Michael, RT, RCIS; Julea Davis, RN; Cindy Holmes; Lacey Smith, RN.

Not pictured: Angela Cater, RN; Debbie Rugeley, RN; Megan Ermis, RN; Woody Kuykendall, RN.

Electrophysiology Staff

From left to right: Alex Kiani, RDCS; Keith Anderle, RN, RCIS; Sindee Blagg, RT, RDCS; Chris Clark, RN; Jana Lowery, RT, RDCS; Kyle Barker, RT, RCIS.

Not pictured: Mohammad Ramzan, RDCS.